

Remarks

The foregoing amendments and following remarks are responsive to the March 19, 2008 Office Action.

Status of the Claims

Claims 1, 7 and 9 are amended. Claims 1-13 are pending.

Support for Amendments to the Claims

Support for the amendments to the claims is found in the specification on page 1, lines 1-4, page 2, lines 24-25, page 5, lines 33-35, and page 13, line 34 to page 14, line 2. No new matter is added.

Rejections under 35 U.S.C. § 112

Claim 9 was rejected under 35 U.S.C. § 112, second paragraph, as being indefinite. Claim 9 is amended herein. In addition, Claim 7, which depends from Claim 1, is amended to delete the term "volatile" which does not appear in Claim 1 with respect to "non-aqueous liquid". No new matter is added. Reconsideration and withdrawal of the rejection are respectfully requested.

Rejections under 35 U.S.C. § 103(a)

Claims 1-5 and 8-13¹ were rejected under 35 U.S.C. § 103(a) as being unpatentable over International Publication No. WO 02/44228 or the equivalent U.S. Patent No. 6,833,406 (Green) in view of U.S. Patent No. 5,171,781 (Farrar).

According to one aspect of the invention, Green relates to a liquid dispersion polymer composition, which includes: (a) from 40 to 60% by weight of a polymer; (b) from 25 to 45% by weight of a silicone polymer fluid; and (c) from 8 to 20% by weight of

¹ Claims 6-7 were not specifically addressed in the Action. Clarification is respectfully requested.

a surfactant or surfactant mixture, each based on the total weight of the composition. The hydrophilic polymers may be obtained from water-swellable, anionic or cationic monomers in a hydrophobic liquid phase (silicone polymer fluid) by reverse phase emulsion polymerization. Cationic monomers include dialkylaminoalkyl(meth) -acrylate or -acrylamide, dimethylaminoethyl methacrylate and methyl chloride quaternary ammonium salt. A volatile hydrophobic solvent may also be used to provide for higher amounts of microparticles in the polymerization. After polymerization is substantially complete, the water and any volatile solvent are removed by distillation under reduced pressure. In the resulting composition, the hydrophilic polymer, which may be in the form of microparticles having an average particle size in the range of 0.1 to 2 microns, remains dispersed in a silicon polymer fluid and an oil-in-water surfactant.

According to one aspect of the invention, Farrar relates to converting a sticky wet mass of inorganic particles to inorganic pellets by mixing into the mass a dispersion of water-absorbing polymeric particles in a water-immiscible liquid. The dispersion may be made by reverse phase polymerization of an aqueous monomer in a water-immiscible liquid. The monomer may be anionic or cationic. A suitable cationic monomer may include a quaternary salt of dialkyl amino alkyl (meth)-acrylate or -acrylamide. The water-immiscible liquid may be a hydrocarbon or halogenated hydrocarbon. The product of the reverse phase polymerization may be described as an emulsion, which may be dried to obtain a substantially dry dispersion. The dry particle size of the final dispersion may be from 1 μm up to 10 μm . The final dispersion may contain 30-40% by weight of polymer, 30-40% by weight of water immiscible liquid and 25-35% by weight water (col. 9, line 57 to col. 14, line 31 of Farrar).

The Examiner alleges that each of the elements and process steps of Applicants' claimed invention are disclosed in the cited references, and further alleges that it would have been obvious to derive an appropriate ratio of components for formulating the polymer particles of the invention wherein the concentration of monomer in the dispersion is below 70% by weight based on the weight of monomer and water.

To support a conclusion of obviousness, either (1) the reference(s) must expressly or impliedly suggest the claimed combination, or (2) the Examiner must present a convincing line of reasoning as to why a skilled worker would have found the claimed invention to have been obvious, in view of the teachings of the reference(s).

Contrary to the Examiner's allegations, the disclosure by Green of several process steps in Applicants' claims does not expressly or impliedly disclose, teach or suggest the invention as claimed. Although Green discloses that (1) cationic monomers may be used, including a methyl chloride quaternary ammonium salt of dimethylamino-ethyl methacrylate; (2) the monomers may be polymerized in a hydrophobic liquid; and (3) after polymerization is substantially complete, the water and any volatile solvent are removed by distillation under reduced pressure, Green does not disclose separating the non-aqueous liquid from the polymer particles by washing the substantially dry emulsion with a volatile organic solvent as in Claims 1-5 and 8-13 (and also Claims 6-7). In contrast, the polymer particles remain suspended in a silicone polymer fluid and an oil-in-water emulsifier in Green.

The addition of Farrar does not cure the deficiencies of Green. Although Farrar discloses (1) cationic monomers, (2) water-immiscible liquids, (3) particles between 1 μm up to 10 μm that may be formed by reverse phase emulsion or suspension polymerization, (4) drying the dispersion and (5) precipitating the particles from the dispersion by adding acetone, neither Farrar nor Green discloses, teaches, or suggests forming a powder that is swellable in water to form a gel with optical clarity as in Claim 1 and Claim 8. Therefore, one skilled in the art, after reading Green and Farrar, would not be led to arrive at the invention as claimed.

In addition, the alleged motivation or reason set forth by the Examiner does not lead one skilled in the art to arrive at the specific combination of steps or amounts of components as claimed, in view of the lack of disclosure in Green relating to separating the non-aqueous liquid from the polymer particles by washing the substantially dry emulsion with a volatile organic solvent as in Claims 1-13, and in view of the lack of disclosure by Green and Farrar that the resulting particles are swellable in water to form

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a gel with optical clarity. In addition, no convincing line of reasoning is provided as to why the specific combination of process steps or the amounts of components as claimed would have been obvious. The only apparent reason for making the specific combination of process steps and amounts of components as claimed is based on Applicants' disclosure.

In view of the foregoing, since it would not have been obvious for the skilled worker to arrive at the particular combination of steps and amounts of components as claimed, with any reasonable expectation of success, the rejection should be withdrawn. Reconsideration and withdrawal of the rejection are respectfully requested.

Fees

No fees are believed due. The Commissioner is authorized, however, to charge any fees deemed due (or credit any balance owing) to Deposit Account No. 50-1177.

Conclusion


It is respectfully submitted that Claims 1-13 are in condition for allowance. A Notice of Allowance is respectfully requested. If anything further is needed to advance the allowance of this application, the Examiner is requested to contact Applicants' attorney at the telephone number indicated below.

Respectfully submitted,

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Date

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